Amendments to the Specification:

Please amend the specification as follows:

Please insert the following before the paragraph starting at page 1, line 3:

BACKGROUND

Please replace the paragraph starting at page 1, line 13, with the following:

A heat exchanger of this kind, also called a stacked-plate heat exchanger, is known for example from DE 100 49 890 A1. In the stacked construction, metal plates of a trough-shaped design are soldered directly together at their peripheral edges. The plates have the same or identical shape, such that the number of necessary components is kept low. The heat transfer surface is determined by the number of plates and, as a result, by the length of the flow channel and by the dimensions of the flow channel itself. The greater the number of plates and the sizes of the flow channel, the greater therefore is the heat transfer surface, with at the same time a decreasing Reynolds ~~Reynolds'~~ number. Effective heat exchange is thus limited because, with a maximum number of plates, an increase in heat exchange, afforded by the advantage of a greater heat transfer surface, can no longer be achieved because of the disadvantage of a smaller heat exchange on account of the lower Reynolds ~~Reynolds'~~ number. In addition, the production costs are the higher the more plates are used.

Please replace the paragraph starting at page 2, line 2, with the following:

According to the invention, this object is achieved by a heat exchanger of the type mentioned in the introduction and having the features ~~of claim 1~~ described herein.

Please insert the following before the paragraph staring at page 2, line 6:

SUMMARY

Please replace the paragraph starting at page 2, line 6, with the following:

The invention is based on the concept that a more intensive heat exchange should be permitted while retaining as far as possible the structural design, i.e. the dimensions, in particular the external dimensions, of the heat exchanger. An objective is to ensure that a structural adaptation of the heat exchanger cancels the contradictory criteria - increase in heat transfer surface with decreasing Reynolds ~~Reynolds'~~ number - such that the Reynolds ~~reynolds'~~ number as far as possible does not decrease. For this purpose, a heat exchanger with several tray-shaped plates provided with passages is geometrically simplified in that a flow channel which is formed by passages lying essentially above one another and which

traverses the plates, has an elongate cross section. By means of such a simple geometric change to the heat exchanger, it is possible, while retaining the same structural volume of the heat exchanger, to ensure a more intensive cooling by greater heat transfer, without the Reynolds ~~Reynolds'~~ number decreasing.

Please insert the following before the paragraph staring at page 3, line 27:

BRIEF DESCRIPTION OF THE DRAWINGS

Please replace the paragraph starting at page 3, line 27, with the following:

Illustrative embodiments of the invention are explained in more detail below with reference to ~~a drawing~~ the drawings, in which:

Figure 1 shows a schematic representation of a heat exchanger, in particular a stacked-plate heat exchanger with flow channels,

Figure 2 shows a schematic representation of an embodiment for a plate of a heat exchanger a) according to the prior art and b) according to the present invention,

Figure 3 shows a diagram depicting the profile of the specific heat output Q/dTe as a function of the flow volume over time V/t of the media flowing through the heat exchanger, and

Figure 4 shows a schematic representation of a connector element for a heat exchanger according to Figure 1.

Please insert the following before the paragraph starting at page 4, line 10:

DETAILED DESCRIPTION

Please replace the paragraph starting at page 4, line 13, with the following:

Figure 1 shows a heat exchanger 1 which is used, for example, as an oil cooler in a vehicle for a combustion engine. The heat exchanger 1 is designed as a stacked-plate heat exchanger. For this purpose, the heat exchanger 1 comprises several and in particular tray-shaped plates 2a to 2z (hereinafter referred to simply as plates 2). The plates 2 are stacked or placed on top of one another and sealed together at their peripheral edges, e.g. soldered. The plates 2 are provided with passages 4. The plates 2 are of essentially identical design. The passages 4 are provided as far as possible at the same positions above one another, such that, when the plates 2 are stacked on top of one another, a flow channel 6 is formed through the passages 4 lying above one another. The passages 4 lying above one another in the plates 2 thus have substantially identical dimensions and cross-sectional shapes. Passages 4 arranged

adjacent to one another and forming several separate flow channels 6 can have other dimensions and other cross-sectional shapes. The respective shape and length of the flow channel 6 is determined in particular by a medium M flowing through the flow channel 6.